

What is claimed is:

1. A method of parallel data communication across a communication channel between an origination end and a destination end, comprising:
 - regularly transferring information from the origination end to the destination end, including transmitting idle data from the origination end to the destination end in response to the destination end being busy and during periods when no commands or data or statuses are pending; in response to the destination end not being busy, from the origination end to the destination end
 - sequentially transferring read or write commands and, according to a write protocol, pending write data, and
 - transmitting idle packets during periods when no commands are pending; and in response to the origination end not being busy, from the destination end to the origination end
 - sequentially transferring pending end-of-write statuses, and
 - sequentially transferring pending read data and read statuses packets according to a read protocol during periods when no end-of-write statuses are pending.
2. The method of claim 1, wherein the write protocol further includes:
 - transferring from the originating end a write command, sequentially followed by write data and an end-of-write notice.
3. The method of claim 2, further including transferring from the destination end an end-of-write status responsive to an end-of-write notice.
4. The method of claim 2, further including transferring from the originating end a write address immediately following each write command

1 5. The method of claim 2, further including transferring from the originating end byte enable
2 information preceding a portion of the write data.

1 6. The method of claim 1, wherein read statuses included end-of-the-read and error
2 information.

1 7. A method of claim 1, wherein information is packetized for transfer.

1 8. The method of claim 1, further including regularly transferring information from the
2 destination end to the origination end, including transmitting idle data from the destination end to
3 the origination end in response to the origination end being busy and during periods when no read
4 data or read statuses are pending.

1 9. The method of claim 1, wherein information is transferred from the origination end to the
2 destination end across a first uni-directional datapath of the communication channel, and
3 information is transferred from the destination end to the origination end across a second uni-
4 directional datapath of the communication channel.

1 10. A data communication arrangement for parallel data communication across a
2 communication channel from an origination end to a destination end, comprising:
3 means for regularly transferring information from the origination end to the destination
4 end, including means, responsive to the destination end being busy, for transmitting idle data from
5 the origination end to the destination end and when no commands, or data or statuses are pending;
6 means, responsive to the destination end not being busy, and from the origination end to
7 the destination end,
8 for sequentially transferring read or write commands and, according to a write
9 protocol, pending write data, and
10 for transmitting idle packets during periods when no commands are pending; and
11 means, responsive to the origination end not being busy, and from the destination end to
12 the origination end,

13 for sequentially transferring pending end-of-write statuses, and
14 for sequentially transferring pending read data and read statuses packets according to a
15 read protocol during periods when no end-of-write statuses are pending.

1 11. The arrangement of claim 10, further including means for transferring from the originating
2 end a write command, sequentially followed by write data and an end-of-write notice.

1 12. The arrangement of claim 10, further including means for transferring from the destination
2 end an end-of-write status responsive to an end-of-write notice.

1 13. The arrangement of claim 10, further including means for regularly transferring
2 information from the destination end to the origination end, including transmitting idle data from
3 the destination end to the origination end in response to the origination end being busy and during
4 periods when no read data or read statuses are pending..

1 14. The arrangement of claim 10, further including:
2 means for simultaneous continuous uni-directional information transfer from the originating
3 end to the destination end, and continuous uni-directional information transfer from the
4 destination end to the origination end.

1 15. A data communication arrangement for parallel data communication across a
2 communication channel from an origination end to a destination end, comprising:
3 a first data processor arrangement located at the origination end and adapted to regularly
4 transfer information to the destination end and, in response to the destination end being busy, to
5 transmit idle data to the destination end when no commands, or data or statuses are pending;
6 the first data processor arrangement being further adapted to, in response to the destination
7 end not being busy,
8 sequentially transfer to the destination end
9 read or write commands and,

10 according to a write protocol, pending write data, and
11 transmit idle packets during periods when no commands are pending; and
12 a first data processor arrangement located at the destination end and adapted to, in response
13 to the origination end not being busy
14 sequentially transfer to the origination end pending end-of-write statuses, and
15 sequentially transfer to the origination end pending read data and read statuses packets
16 according to a read protocol during periods when no end-of-write statuses are pending